

ABSTRACT

Output power fluctuations in a distributed feedback laser arrangement are reduced by inducing a saturable absorption grating in a saturable absorption region. Light is coupled into a DFB region and amplified in an amplification region. A feedback loop reflects a portion of the amplified light, and the counter-propagating beams induce an absorption grating in a saturable absorption region which suppresses output oscillations. The amplification region can comprise an erbium doped fiber, and the saturable absorption region can comprise an underpumped portion of such a fiber, or a further length of such fiber, or a planar waveguide.

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